

REMARKS

In the last Office Action, claims 11 and 18 were withdrawn from further consideration as being drawn to a non-elected invention. Applicant respectfully points out that claims 11 and 18 depend upon generic base claims 1 and 12 and requests consideration of these claims upon allowance of base claims 1 and 12.

Claims 5, 10 and 17 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner stated that the recitation of "terpenic oil" in claims 5 and 10 is indefinite because the term "terpenic" is not be sufficiently definite in scope. The Examiner further stated that the phrase "wherein the first and second solvents" in claim 17 lacks a sufficient antecedent basis.

Claims 1, 2, 4-7, 9, 10, 12-14, 16 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,150,048 to Hollub et al. ("Hollub") in view of U.S. Patent No. 6,420,327 to Machac et al. ("Machac"). The Examiner stated that Hollub discloses a nail lacquer removing preparation which contains an organic lacquer solvent, an internally plasticized polymer, a lipophilic ingredient, a wetting and/or dispersing agent, a thickener, and a small amount of a silicone oil.

Machac was relied upon as disclosing a coating removal preparation containing an amide as a wetting agent.

Applicant respectfully submits that claims 1-18 patentably distinguish over the prior art of record.

The present invention recited by independent claim 1 relates to a clear coating solution comprising a first ingredient solute having a silicone oil and a first solvent, a second ingredient solute having a polymethacrylic acid alkyl ester and a second solvent, an amide-based clearing agent added to a mixture of the first and second ingredient solutes in an amount effective to dissolve the silicone oil and the polymethacrylic acid alkyl ester to form a clear solution, and a functional agent selected from resins and fatty acid alkyl esters added to the mixture in an amount effective to impart a desired coating feature to the clear solution.

Similarly, independent claim 12 recites an amide-based clearing agent added to a mixture of a first solute containing silicone oil and a second solute containing polymethacrylic acid alkyl ester in an amount effective to dissolve the silicone oil and the polymethacrylic acid alkyl ester to form a clear solution.

Independent method claim 6 recites a method of producing a coating solution similar to that recited by independent claim 1.

The clear coating solution of the present invention differs from prior art solutions primarily by the use of an

amide-based clearing agent to dissolve the silicone oil and the polymethacrylic acid alkyl ester to form a clear solution. The benefits and efficacy of using an amide in the claimed coating solution are described in the various comparative examples disclosed in the specification. As shown, for example, smaller amounts of amides such as formamide, acetamide and formohydrazide result in a clear solution of the silicon oil and polymethacrylic acid alkyl ester than other additives such as methanol.

Accordingly, the present invention recited by independent claims 1, 6 and 12 concerns the addition of an amide compound as a clearing agent to a coating solution formed of a silicon oil and a polymethacrylic acid alkyl ester in an amount sufficient to dissolve the silicone oil and the polymethacrylic acid alkyl ester to from a clear solution. The purpose of the clearing agent is to dissolve other components of the compound to form a clear solution.

In addition, the optional inclusion of a functional agent is done to achieve a desired coating feature. For instance, the specification discloses the addition of a resin to the compound to achieve a glossy finish or a fatty acid alkyl ester to impart a smoothing feature. The type of functional agent additive depends upon the desired finish and the representative examples disclosed by applicant are not critical to the claimed invention.

The prior art, which includes applicant's previous work as disclosed in U.S. Patent No. 5,721,301, discloses a coating solution formed of an ingredient solute comprised of silicone oil and polymethacrylic acid alkyl ester, a basic solvent selected from the group consisting of terpenic oils, heptane, n-decane, tetrachloroethane, 2-butanone, 1,4-dioxane, ethoxyethanol and toluene, and a buffer solvent selected from the group consisting of methanol, acetic acid alkyl and tetrachloromethane. The buffer solvent is added to a mixture of the ingredient solute and the basic solvent so that both the silicone oil and the polymethacrylic acid alkyl ester can be dissolved to form a uniform solution.

The inventive coating solution differs from this in that it comprises a first solute of a silicone oil, a second solute of a polymethacrylic acid alkyl ester, and a clearing agent comprising one or more amides added to a mixture of the first and second solutes in an amount effective to dissolve the silicone oil and the polymethacrylic acid alkyl ester to form a clear solution. As noted above, the solvents, the silicon oil, and the polymethacrylic acid alkyl esters are all well known compounds. The use of an amide as a clearing agent is not known.

The inventive coating solution may serve as a water repellant or polishing agent, and is produced by mixing a

silicone oil solute and a polymethacrylic acid alkyl ester solute with a clearing agent comprised of an amide.

The claimed solvents ensure that the main ingredients (the silicone oil and the polymethacrylic acid alkyl ester) are dissolved to form uniform, clear solutions.

No corresponding compounds are disclosed or suggested by the prior art of record.

Hollub discloses a nail lacquer removing agent rather than a coating solution. Hollub discloses that by incorporating a small proportion of an internally plasticized polymer or copolymer in a lacquer solvent, a thin film having a mother of pearl lustre may be formed on a fingernail treated with the lacquer solvent. In this regard, Hollub discloses that homopolymers or copolymers of esters of methacrylic acid or acrylic acid with a lower aliphatic alcohol are most desirable, such as methyl methacrylate, ethylmethacrylate, methyl acrylate, ethyl acrylate, isopropyl acrylate, or butyl acrylate. To further enhance the gloss of a treated fingernail, Hollub discloses that a small proportion of a silicone oil may be added to the nail lacquer removing preparation.

Accordingly, Hollub fails to disclose or suggest the addition of an amide compound as a clearing agent to a mixture of a silicone oil and polymethacrylic acid alkyl ester in an

amount effective to dissolve the silicone oil and the polymethacrylic acid alkyl ester to form a clear solution.

Machac does not cure the foregoing defects. Machac discloses a coating remover comprising an alkylene carbonate, hydrogen peroxide, water, first and second alcohols, and optionally, pine oil and a surfactant to increase the wetting properties of the remover. Machac discloses that the surfactant may include a cetyl palmitic alkanol amide.

Thus, while Machac discloses the use of an amide as a surfactant or co-solvent, it does not suggest the use of an amide as a clearing agent for dissolving a silicone oil and a polymethacrylic acid alkyl ester as required by independent claims 1, 6 and 12. In Machac, the amide surfactant is added to improve the wetting properties of the lacquer solvent.

The function of the amide surfactant in the claimed invention is entirely different from that of the amide clearing agent of the inventive compound. Machac does not disclose or suggest that the amide functions as or serves as a clearing agent for dissolving the mixture of the silicone oil and the polymethacrylic acid alkyl ester. Nor would Machac have fairly suggested to one of ordinary skill in the art the addition of an amide as a clearing agent to a mixture in an amount effective to dissolve a silicone oil and a polymethacrylic acid alkyl ester to form a clear solution as required by the independent claims.

Machac further discloses that an amide can be used as a co-solvent relative to a main solvent composed of alkylene carbonate, hydrogen peroxide, water, first and second alcohols, and pine oil. In this use, the main solvent does not contain either a silicone oil or a polymethacrylic acid alkyl ester.

A claim rejection based upon obviousness under 35 U.S.C. §103(a) must be supported by evidence that establishes the obviousness of each limitation of a rejected claim. When any form of modification of the prior art is needed to replicate the claimed invention, the Examiner must demonstrate that the desirability of such modification is suggested by the prior art. Stated otherwise, the desirability of such modification must be disclosed, suggested, or motivated by the prior art. See, e.g., In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. Id.

In the instant case, no prima facie case of obviousness of claims 1, 6 and 12 can be supported based on the combined teachings of Hollub and Machac. There is nothing in Machac that would expressly or impliedly teach or suggest the addition of an amide as a clearing agent in an amount

effective to dissolve a silicone oil and a polymethacrylic acid alkyl ester to form a clear solution.

Although Machac discloses the use of an amide as a wetting agent, the claimed invention requires addition of a sufficient amount of the amide to form a clear solution. Machac does not suggest this requirement of independent claims 1, 6 and 12.

Accordingly, even the combined teachings of the prior art would not have suggested the invention recited by the independent claims.

For the foregoing reasons, applicant respectfully submits that claims 1-18 patentably distinguish over the prior art of record.

Finally, applicant respectfully disagrees with the Examiner's contention that recitation of "terpenic oil" is indefinite. Terpenic oils are well known compounds, as revealed by even a simple Internet search of the term. Copies of various results obtained by such a search, including a dictionary definition, are attached hereto and demonstrate that terpenic oils are well known compounds and that use of the phrase "terpenic oils" does not render the claims indefinite.

In view of the foregoing amendments and discussion, the application is believed to be in allowable form.

Accordingly, favorable reconsideration and allowance of the claims are most respectfully requested.

Respectfully submitted,

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April 13, 2004

Date